XR5 SPOT

User's Manual Rel 1.1 **GB**

D.T.S. Illuminazione srl - ITALY
http://www.dts-lighting.it

The Lighting Company

Made in Italy

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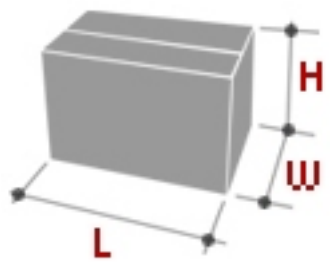
1- TECHNICAL FEATURES

The XR5 Spot is fitted with a Philips MSD 250/2 discharge lamp (GY9,5 lampholder base), with a colour temperature of 8500 °K and a luminous flux of 18,000 Lumens.
Average lifespan is 3000 hours, with replacement recommended before 3200 hours
Other recommended lamps: Osram HSD 250/2, GE CSD 250/2.
The unit incorporates:
Dichroic parabolic reflector
Motorized Focus system
Dimmer (emitted light is controlled by progressive and linear dimming).
Shutter (instantaneous shutter opening/closure).
Strobe: mechanical strobe effect (frequency variable from 0.85 flashes/sec to 10 flashes/sec).
Motorized iris.
2 gobo wheels: 1 rotating (7 indexable 16 bit gobos + open) and 1 fixed (11 gobos)
1 Colour wheels (8 colours).
Prism (indexable 3 facet prism rotating in both directions).
Electromagnetic ballast.
Pan: 540° in 2.8 seconds (8 or 16 bit) with auto repositioning system.
Tilt: 270° in 2.0 seconds (8 or 16 bit) with auto repositioning system.
USITT Standard DMX 512 input signal.
15 or 21 DMX channels.
4 -eight digit- LED display with 4 buttons.
4 XLR connectors (In and Out) with 3 and 5 pins.

Power supply

Electromagnetic ballast: 230 V (50/60 Hz) standard.
On request: 100 V (50/60 Hz) or 120 V (60 Hz).
Power consumption: 350 W
Remote Lamp on/off via DMX
Operating ambient temperature: -10° / 40°C
Weight: 20 Kg

Dimensions (LxWxH)
projector (432x415x590mm)



Packaging Dimensions (LxWxH)
550 x 440 x 800 mm
Weight
27 Kg

2- IMPORTANT SAFETY INFORMATION

2.1 Fire prevention:

XR5 Spot can fit a Philips MSD250/2, a Osram HSD250/2 or a GE CSD250/2.
The use of any other alternative lamp is not recommended and will null and void the fixture's warranty.
-Never locate the fixture on any flammable surface.
-Minimum distance from flammable materials: 1 MT.
-Minimum distance from the closest illuminable surface: 2 MT.
-Replace any blown or damaged fuses only with those of identical value. Refer to the wiring diagram if there is any doubt.
-Connect the projector to mains power via a thermal magnetic circuit breaker.

2.2 Prevention of electric shock:

-High voltage is present inside the unit. Unplug the unit prior to performing any function which involves touching the inside of the moving head, including lamp replacement.
-The level of technology inherent in the XR5 requires the assistance of specialised personnel for all servicing.Please refer to an authorised DTS service centre.
-A good earth connection is essential for proper functioning of the projector.
-Never connect the unit without proper earth connection.
-The fixture should be located in places with a good air ventilation.

2.3 Protection against ultraviolet radiation:

-Never turn on the lamp if any of the lenses, filters or ABS covering is damaged. Their respective shielding functions will only operate efficiently if they are in perfect working order.
-Never look directly the lamp when it is on.

2.4 Safety:

-The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.
-Always use a second safety cable to sustain the weight of the unit in case of the failure of the main fixing point.
-The external surface of the unit, at various points, may exceed 70°C. Never handle the unit until at least 10 minutes have elapsed since the lamp was turned off.
-Always replace the lamp if any physical damage is evident.
-Never install the fixture in an enclosed area lacking sufficient air flow. The ambient temperature should not exceed 40°C.
-A hot lamp may explode, so always wait for at least 10 minutes prior to attempting to replace the lamp.
-Always wear suitable hand protection when handling the lamp.

2.5 Level of protection against the penetration of solid and liquid objects:

-The projector is classified as an ordinary appliance and its protection level against the penetration of solid and liquid objects is IP 20.

3- MOUNTING THE LAMPS

Warning: Switch off the unit before replacing the lamp.

Philips MSD250/2
Power 250W
Luminous flux 18.000 lm
Colour temperature 8.500°K
Lampbase GY9,5
Rated life 3,000 hours

1) Using a screwdriver, remove the 3 screws X, Y, Z, (photo 1) which fix the lamp holder.

Photo 1

Photo 2

Photo 3

2) Remove the lamp holder assembly and insert the lamp (photo 2).
The lamp used on XR5 Spot is made in quartz glass and should be handled with care. Always follow the instructions supplied in the lamp's packaging. Never touch the glass directly but use the tissue provided in the lamp's packaging. The GY9,5 lamp socket is not symmetrical.
DO NOT USE UNDUE FORCE ON THE GLASS. In case of difficulty, read again the instructions and repeat the procedure.
3) Replace the lamp assembly and tighten the screws X, Y and Z, which were previously removed (photo 3).

3.1 Lamp alignment

Attention: we recommend to align the lamp in the optical system to avoid overheating of the dichroic filters and other components inside the unit.

Photo 4

Apply power and allow the XR5 Spot to reset.
Using either a controller or the control menu (LAMP / ADJUST), strike the lamp and project an open white beam on a flat surface.
Center the hot spot using the 3 adjusters A, B and C (photo 4) until the light is bright and evenly distributed.

4- VOLTAGE AND FREQUENCY

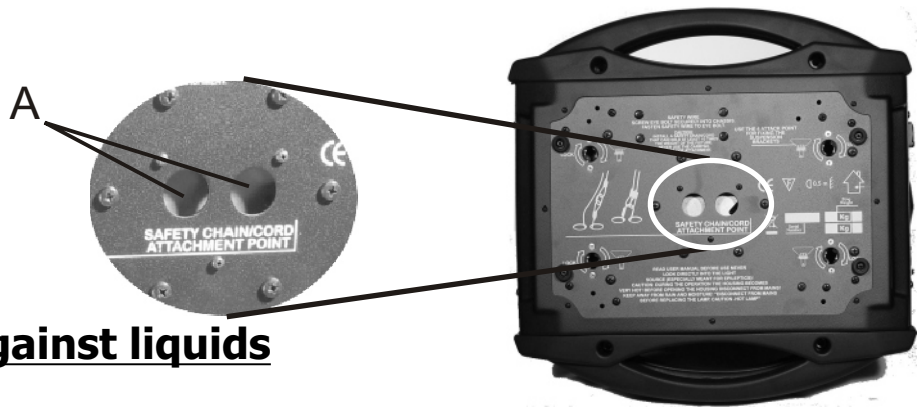
The XR5 Spot with electromagnetic ballast can operate at 230 VOLT 50-60 Hz.
On request 100 V (50/60 Hz) or 120 V (60 Hz).

5- INSTALLATION

XR5 Spot may be either floor or ceiling mounted.
For floor mounting installations, the XR5 Spot is supplied with four rubber mounting feet under the base.
For ceiling mounted installations, we reccomend the use of appropriate clamps to fix the unit to the mounting surface.
The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hang it. The structure should also be sufficiently rigid so as not to move or shake whilst the XR5 is moving.
Four quarter turn fast locks placed on the base, allow to fix the unit in any position, by using the two fast lock C clamps provided in the box.

5.1- Safety cable

We recommend the use of a safety cable or chain connected to the XR5 Spot and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail. Make sure that the iron cable or chain can bear the weight of the entire unit.
You may attach the safety chain to the two holes (A) located on the base of the fixture, as shown in the picture below.



5.2- Protection against liquids

The projector contains electric and electronic components which should under no circumstances come into contact with oil, water or any other liquid. The proper unit functioning would be compromised should this occur.

5.3- Movement

The projector has a maximum movement of 540° for Pan and 270° for Tilt. DO NOT place any obstructions in the path of the projector's movement.

5.4- Risk of fire

Each fixture produces heat and must be installed in a well-ventilated place. The minimum recommended distance from flammable material is 1 MT.
Minimum distance from the object being illuminated is 2 MT.

5.5- Forced ventilation

You will note, on inspection, that the unit features various air inlets and cooling fans located on both the base and head of the fixture. These should, under no circumstances, be blocked or obstructed whilst the projector is in operation.
Doing so could cause the fixture to seriously overheat thereby compromising its proper operation.

5.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow. The ambient temperature should NOT exceed 40°C.

6- MAINS CONNECTION

XR5 Spot with electromagnetic ballast operates at 230 VOLT 50-60 Hz.
Prior to connecting the unit to your mains supply,
ensure that the model in your possession correctly matches
the mains supply available. For connection purposes,
ensure that your plug is capable of supporting 3,15 amps at 230V,
Strict adherence to regulatory norms is strongly recommended.

Electromagnetic ballast
230V 50 / 60Hz

6.1- Protection

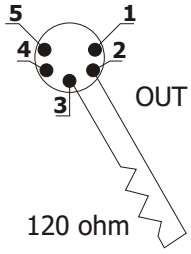
The use of a thermal magnetic circuit breaker is recommended for each XR5 Spot.
A good earth connection is essential for the correct operation of the projector.

7- DMX SIGNAL CONNECTION

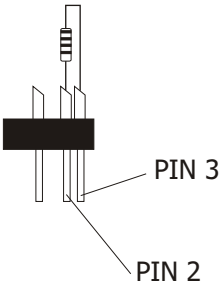
The unit operates using the digital DMX 512 (1990) signal. Connection between the mixer and the projector or between projectors must be carried out using a two pair screened ø 0.5 mm cable and a CANNON XLR 5 or 3 pins connector.
Ensure that the conductors do not touch each other.Do not connect the cable ground to the XLR chassy
The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.
This way, all the projectors are cascade connected.
NB. <u>If the display showing the DMX address flashes, then one of the following errors has occurred:</u>

- DMX signal not present
- DMX address not valid
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor
Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



7.1-DMX Addresses

XR5 Spot can be used in two different modes: 15 or 21 DMX (default) channels.

If you want to use the XR5 Spot in 15 channels mode, select the 15 CH mode from the MODE menu and set the following addresses on the mixer:

Projector 1 A001
Projector 2 A016 If you want to select the next projector, just add "15"

Projector 3 A031
….. A….
projector 6 A076

If you want to use the XR5 Spot in 21 channels mode, select the 21 CH mode from the MODE menu and set the following addresses:

Projector 1 A001
Projector 2 A022 If you want to select the next projector, just add "21"

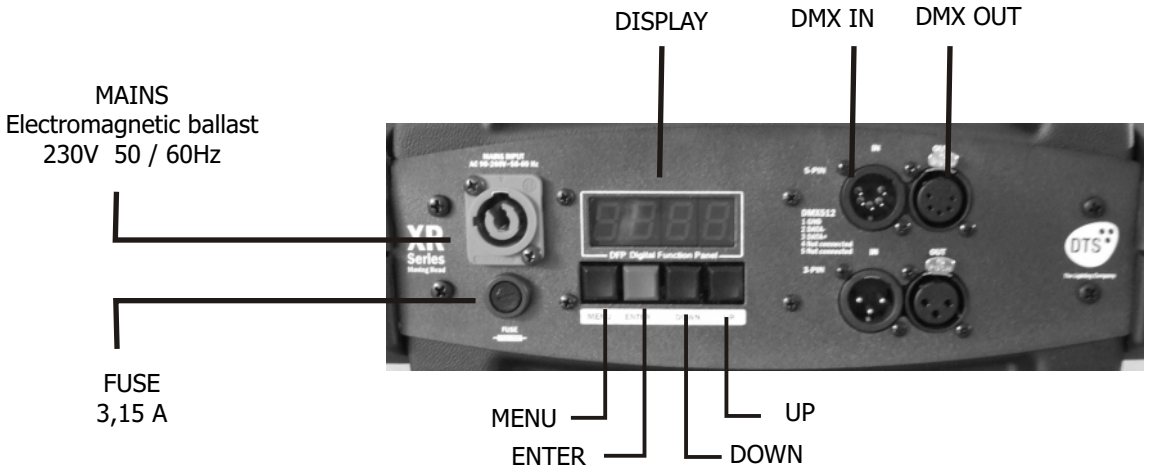
Projector 3 A043
….. A….
Projector 6 A106

7.2-Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX channel. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now set to the new DMX address.

TRICKS:
if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

8- DISPLAY FUNCTIONS



DISPLAY FUNCTIONS

The XR5 Spot display panel shows all the available functions . Using these functions, it is possible to change some of the parameters on the unit. Changing the DTS settings can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.
NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

A001 — MENU ☞ Up-Down ☞ **Pdir** — ENTER ☞ Up-Down ☞ **CU** Clockwise — ENTER ☞

PAN MOVEMENT INVERSION
To reverse Pan movement from left to right and vice versa

Up-Down ☞ **CCU** Counterclockwise — ENTER ☞

MENU ☞ Up-Down ☞ **tdir** — ENTER ☞ Up-Down ☞ **CU** Clockwise — ENTER ☞

TILT MOVEMENT INVERSION
To reverse Tilt movement from bottom upwards and vice versa

Up-Down ☞ **CCU** Counterclockwise — ENTER ☞

MENU ☞ Up-Down ☞ **diSP** — ENTER ☞ Up-Down ☞ **POSI** — ENTER ☞ Up-Down ☞

AA Floor position — ENTER ☞
bb Suspension position — ENTER ☞

REVERSE DISPLAY
To Reverse display's reading depending on the mounting position
(On the ground or suspended).

Up-Down ☞ **StbY** — ENTER ☞ Up-Down ☞

oFF Display OFF — ENTER ☞
on Display always ON — ENTER ☞

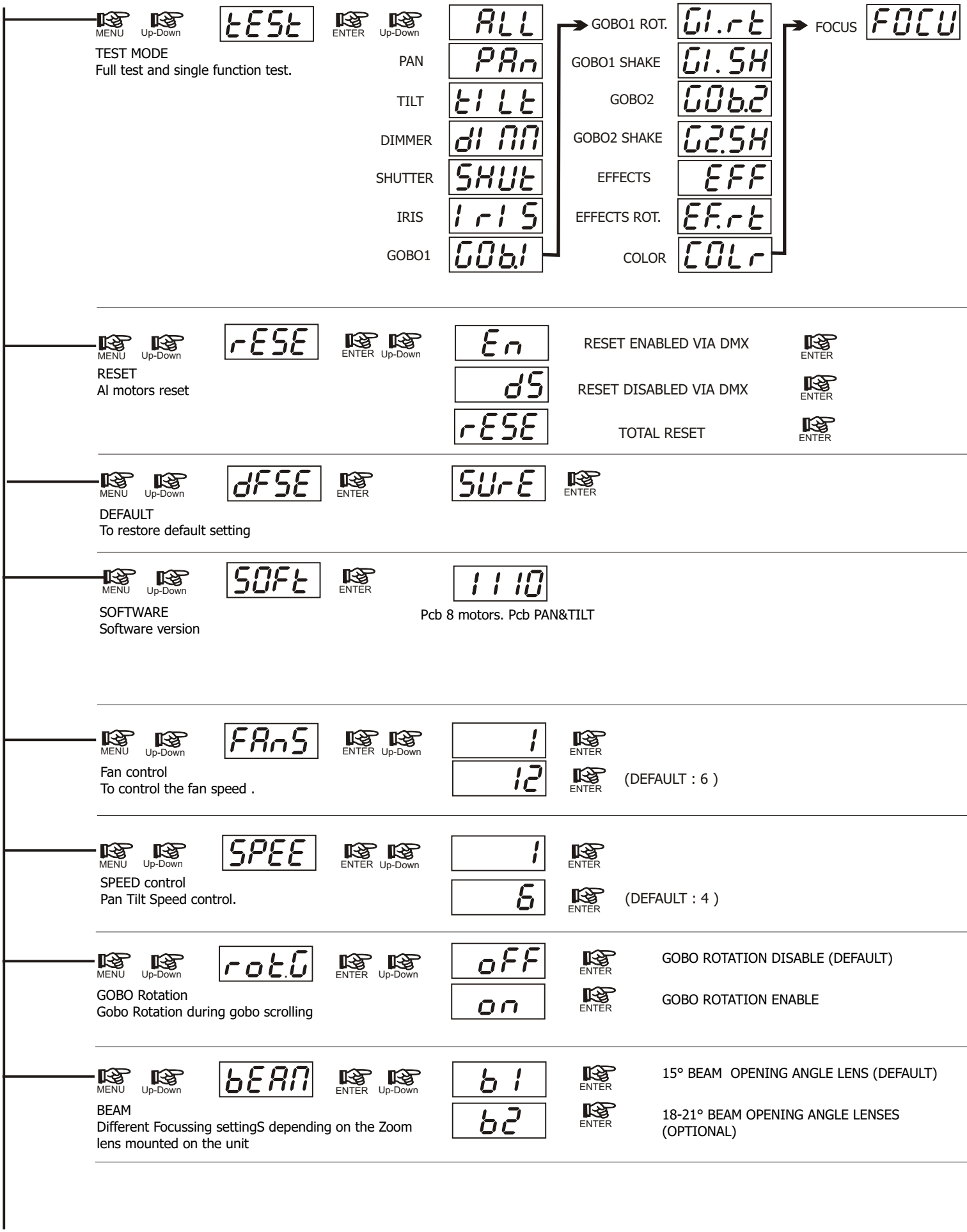
DISPLAY STAND BY
To turn off the display (after 5 seconds)
Or leave it always on.

MENU ☞ Up-Down ☞ **nOdE** — ENTER ☞ Up-Down ☞

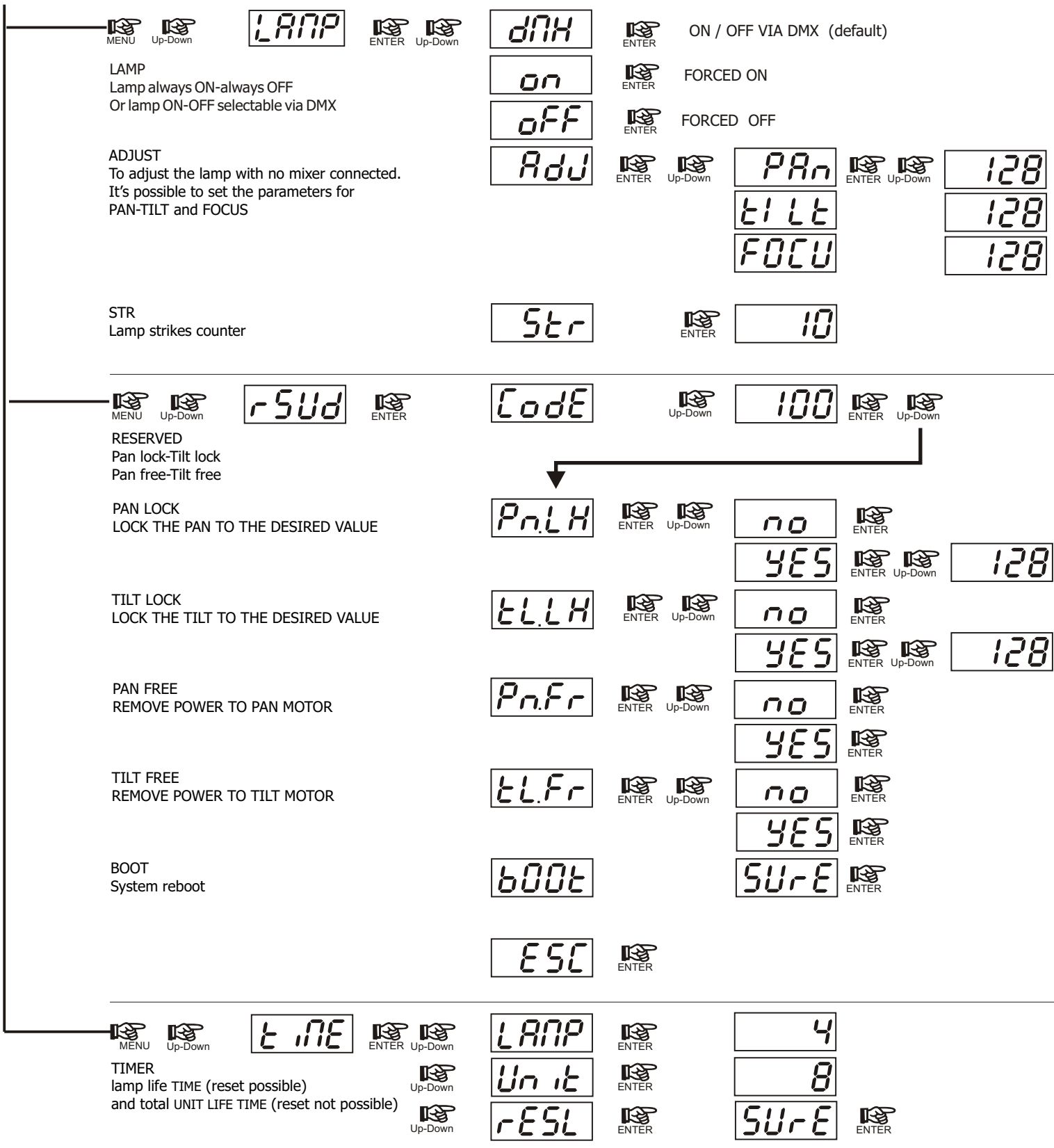
21CH 21 CHANNELS (Pan & Tilt 16 bit) — ENTER ☞ (DEFAULT)
Up-Down ☞ **15CH** 15 CHANNELS (Pan & Tilt 16 bit) — ENTER ☞

DMX MODE
To select DMX mode : 21-15 channels

8- DISPLAY FUNCTIONS



8- DISPLAY FUNCTIONS



10- PAN & TILT SPEED (SPEE) (default: 4)

You can set the PAN and TILT motors at high speed on your XR5 Spot.
Press menu until you see SPEE.
Press ENTER and select a speed with UP-DOWN (there are 6 speeds). Confirm by pressing ENTER.
When you use speed 6 (the highest) PAN and TILT speed is very high and your projector may loose its path. In this case, the encoder correct the position.

11- FAN SPEED (FANS)(default: 6)

Fan speed regulation makes it possible to reduce fan noise. However, the ambient temperature must be less than 35° C.

11- ERROR MESSAGES

— **ERROR: ENCODER PAN**

— **ERROR: ENCODER TILT**

— **ERROR: DMX ADDRESS**

— **ERROR: LOAD DATA EEPROM**

— **ERROR: INTERNAL COMMUNICATION**

— **ERROR: SYNCHRONIZED FREQUENCY MEASURE(SYNCHRONISM FOR LAMP ON)**

— **ERROR: COLOR 1 WHEEL POSITION**

— **ERROR: GOBO1 WHEEL POSITION**

— **ERROR: GOBO1 WHEEL INDEX**

— **ERROR: FOCUS POSITION**

— **ERROR: IRIS POSITION**

— **ERROR: GOBO2 POSITION**

12- HIDDEN MENU

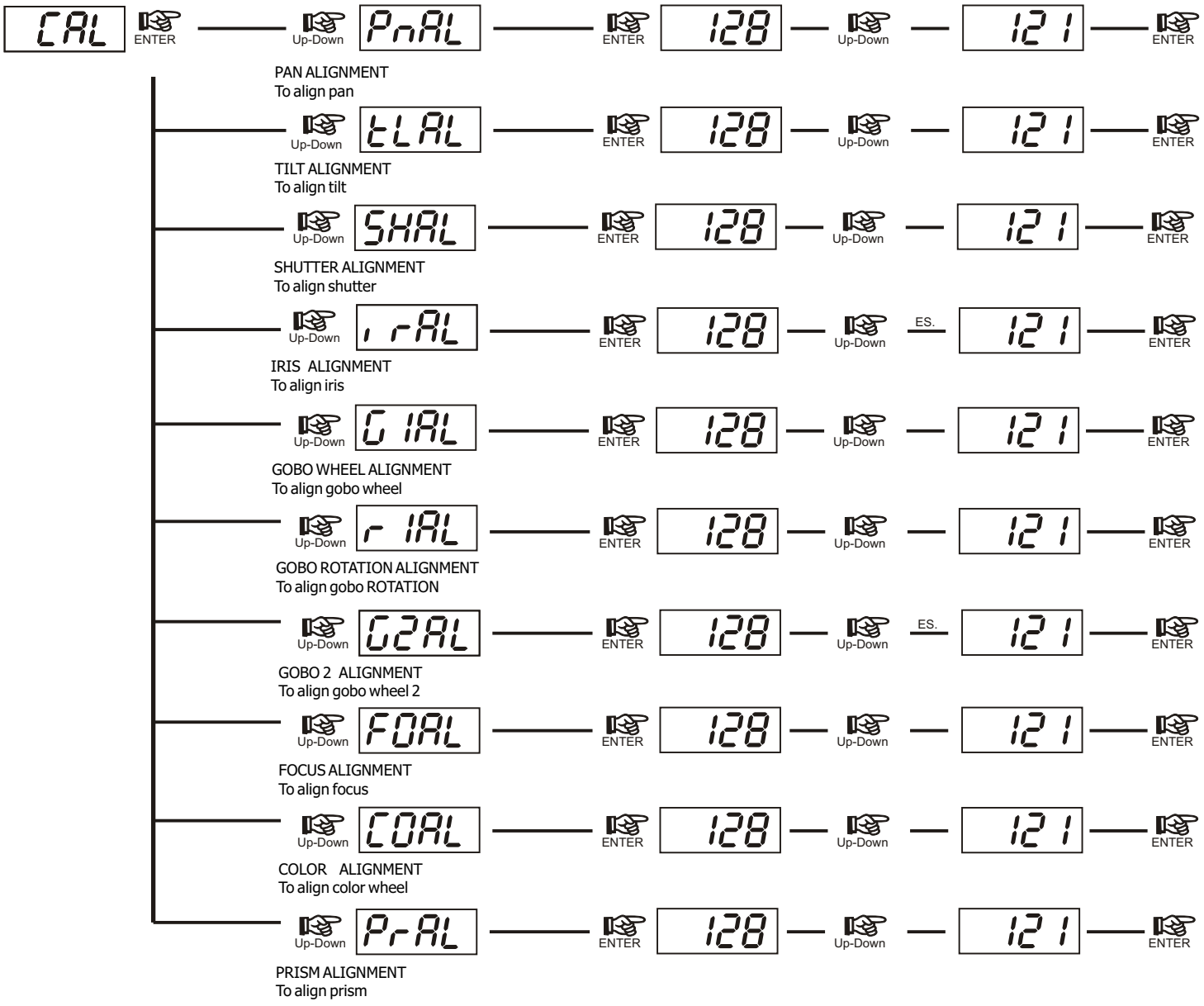
For technical personnel only.

To operate this menu:

-Connect the projector to the DMX controller (DMX SIGNAL MUST BE CORRECTLY RECEIVED)

- Reset the XR5 Spot (reset from the MENU, not from the DMX controller!).
- While reset is running, press the MENU and ENTER keys at the same time.

CAL	Electronic calibration of the motors.
rESN	Reset EEPROM (Reset all settings. ATTENTION: by pressing this key you must repeat all previous calibrations)
ESC	Exit from hidden menu.



13- OPENING THE PROJECTOR HOUSING

It is possible to inspect the inside of the projector by removing the cover as indicated below.

ATTENTION

REMOVE MAINS POWER PRIOR TO ACCESSING THE PROJECTOR'S INTERNAL COMPONENTS.

1) Loosen the 3 screws which fix the head covers (photo 1) .
2) Once unscrewed, simply lift the covers to access the internal components (photo 2).

Photo 1

Photo 2

14- REPLACING GOBOS

XR5 Spot uses a mechanical system which allows the fixture's gobos to be removed without the use of special tools. Replacement gobos should be made of either heat resistant glass or metal.
An ever-increasing range of gobos is available from your DTS sales network.
Gobo dimensions are as follows:
ø external = 27.9 mm
ø of image with defined edge = 24 mm
thickness = from 0.2 to 4 mm (see catalogue)

Replacing gobos on the rotating gobo wheel

When replacing gobos, ensure that the projector is switched off.
1) Open the projector housing as described above.
2) Remove the gobo holder to allow easier access to the gobo(photo 1 and 2).
3) Release the gobo retaining spring and carefully remove the gobo (photo 3).
4) Reverse the procedure to install a replacement gobo.

Photo 1

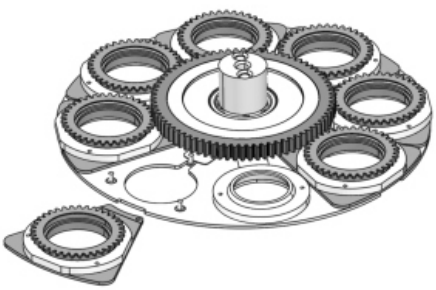


Photo 2

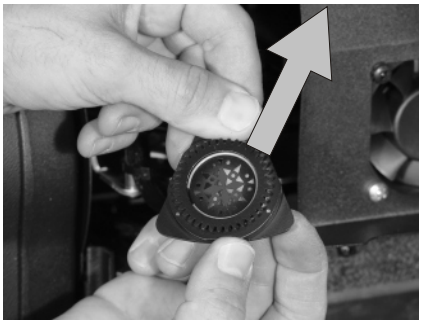


Photo 3

15- PERIODIC CLEANING

15.1- Lenses and reflectors

Even a fine layer of dust can reduce the luminous output substantially. Regularly clean all lenses and the reflector using a soft cotton cloth, dampened with a specialist lens cleaning solution.

15.2- Fans and air passages

The fans and air passages must be cleaned approximately every 6 weeks. This periodic cleaning will depend on the conditions in which the projector operates. Suitable instruments for performing this type of maintenance are a brush and a common vacuum cleaner or an air compressor. If necessary, clean the fans and air passages more frequently.

16- PERIODIC CONTROLS

Lamp

The lamp should be replaced if there is any visible damage or deformation due to heat. This will help to avoid the danger of the lamp exploding.

Mechanical parts

Periodically check all mechanical parts,gears, guides, belts, etc.for wear and tear, replacing them if necessary. Periodically check the lubrication of all components, particularly the parts subject to high temperatures. If necessary, lubricate with suitable lubricant, available from your D.T.S. distributor. Check the tension of the belts and adjust it if necessary.

Electrical components

Check all electrical components for correct earthing and proper connection of all connectors, refastening if necessary.

Fuse replacement

Locate the fuse, which protects the lamp and electronics, in the base of the XR5 Spot
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary.

Attention

Disconnect mains power prior to removing the projector housing.

17- DMX PROTOCOL

15 CHANNELS MODE

1 **PAN msb 540°**
2 **PAN lsb**
3 **TILT msb 270°**
4 **TILT lsb**
5 **SPEED MOVEMENT**
6 **DIMMER**
7 **SHUTTER**
8 **COLOUR**
9 **ROTATING GOBO WHEEL (GOBO 1)**
10 **GOBO ROTATION / INDEX - PRISM ROTATION**
11 **FIXED GOBO WHEEL (GOBO 2)**
12 **IRIS**
13 **PRISM**
14 **FOCUS**
15 **LAMP ON / OFF - RESET**

DMX CHANNEL	1	Parameter: **PAN msb**

DMX CHANNEL	2	Parameter: **PAN lsb**

DMX CHANNEL	3	Parameter: **TILT msb**

DMX CHANNEL	4	Parameter: **TILT lsb**

DMX CHANNEL	5	Parameter: **SPEED MOVEMENT**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-25	**18**				**Fast movement**
26-127					**Vector mode from fast to slow**
128-247					**Variable time reaction to DMX signal (fast to slow)**
248-255	**251**				**Slow reaction time to DMX signal**

DMX CHANNEL	6	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-7	**4**				**Black-out**
8-255					**Proportional dimmer**

DMX CHANNEL	7	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-19					**Black-out**
20-39					**Open**
40-59					**Black-out**
60-79					**Random Strobe**
80-89					**Strobe speed 1 min.**
90-99					**Strobe speed 2**
100-109					**Strobe speed 3**
110-119					**Strobe speed 4**
120-129					**Strobe speed 5**
130-139					**Strobe speed 6 max.**
140-149					**Pulse open speed 1 min.**
150-159					**Pulse open speed 2**
160-169					**Pulse open speed 3**
170-179					**Pulse open speed 4 max.**
180-189					**Pulse closed speed 1 min.**
190-199					**Pulse closed speed 2**
200-209					**Pulse closed speed 3**
210-219					**Pulse closed speed 4 max.**
220-227					**Colour and Gobo in black-out**
228-233					**Pan and Tilt in black-out**
234-255					**Open**

DMX CHANNEL	8	Parameter: **COLOUR**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Colour1 (White)**
11-21	**16**				**Bicolour ½**
22-32	**27**				**Colour2**
33-43	**38**				**Bicolour 2/3**
44-54	**49**				**Colour3**
55-65	**60**				**Bicolour 3/4**
66-76	**71**				**Colour4**
77-87	**82**				**Bicolour 4/5**
88-98	**93**				**Colour5**
99-109	**104**				**Bicolour 5/6**
110-120	**115**				**Colour6**
121-131	**126**				**Bicolour 6/7**
132-142	**137**				**Colour7**
143-153	**148**				**Bicolour 7/8**
154-164	**159**				**Colour8**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
165-175	**170**				**Bicolour 8/9**
176-186	**181**				**Colour9**
187-197	**192**				**Bicolour 9/1**
198-200	**199**				**Right rotation speed 1 max.**
201-203	**200**				**Right rotation speed 2**
204-206	**205**				**Right rotation speed 3**
207-209	**208**				**Right rotation speed 4**
210-212	**211**				**Right rotation speed 5**
213-215	**214**				**Right rotation speed 6**
216-218	**217**				**Right rotation speed 7**
219-221	**220**				**Right rotation speed 8**
222-224	**223**				**Right rotation speed 9 min.**
225-228	**226**				**Stop**
229-231	**230**				**Left rotation speed 1 min.**
232-234	**233**				**Left rotation speed 2**
235-237	**236**				**Left rotation speed 3**
238-240	**239**				**Left rotation speed 4**
241-243	**242**				**Left rotation speed 5**
244-246	**245**				**Left rotation speed 6**
247-249	**248**				**Left rotation speed 7**
250-252	**251**				**Left rotation speed 8**
253-255	**254**				**Left rotation speed 9 max.**

DMX CHANNEL	**9**	Parameter: **ROTATING GOBO WHEEL (GOBO 1)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-25	**12**				**Open**
26-51	**38**				**Gobo 1**
52-77	**64**				**Gobo 2**
78-103	**90**				**Gobo 3**
104-129	**116**				**Gobo 4**
130-155	**142**				**Gobo 5**
156-181	**168**				**Gobo 6**
182-207	**194**				**Gobo 7**
208-213	**210**				**Speed rotation 1 min.**
214-219	**216**				**Speed rotation 2**
220-225	**222**				**Speed rotation 3**
226-231	**228**				**Speed rotation 4**
232-237	**234**				**Speed rotation 5**
238-243	**240**				**Speed rotation 6**
244-249	**246**				**Speed rotation 7**
250-255	**252**				**Speed rotation 8 max.**

DMX CHANNEL	10	Parameter: **GOBO 1 ROTATION/INDEX - PRISM ROTATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127				**Proportional index 0° / 360°**	
128-180				**Left rotation from max to min**	
181-202				**Stop**	
203-255				**Right rotation from min to max**	

DMX CHANNEL	11	Parameter: **FIXED GOBO WHEEL (GOBO 2)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-16					**Open**
17-33					**Gobo 1**
34-50					**Gobo 2**
51-67					**Gobo 3**
68-84					**Gobo 4**
85-101					**Gobo 5**
102-118					**Gobo 6**
119-135					**Gobo 7**
136-152					**Gobo 8**
153-169					**Gobo 9**
170-186					**Gobo 10**
187-207					**Gobo 11**
208-213					**Speed rotation 1 min**
214-219					**Speed rotation 2**
220-225					**Speed rotation 3**
226-231					**Speed rotation 4**
232-237					**Speed rotation 5**
238-243					**Speed rotation 6**
244-249					**Speed rotation 7**
250-255					**Speed rotation 8 max.**

DMX CHANNEL	12	Parameter: **IRIS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**Open**
10-171				**Linear Iris from Open to Closed**	
172-199			**Iris pulse at different speeds from Min to Max**		
200-227			**Iris pulse with flash closing from Min to Max**		
228-255			**Iris pulse with flash openig from Min to Max**		

DMX CHANNEL	13	Parameter: **PRISM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**No effect**
128-255					**Prism inserted**

DMX CHANNEL	14	Parameter: **FOCUS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Linear Focus**

DMX CHANNEL	15	Parameter: **LAMP ON / OFF - RESET**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**No Effect**
10-60				**Lamp OFF (activ.after 3 seconds)**	
61-129				**No Effect**	
130-179				**Lamp ON (activ.after 3 seconds)**	
180-200					**No Effect**
201-239					**Internal motor reset**
240-255					**Total Reset**

21 CHANNELS MODE (DEFAULT)

1 PAN msb 540°
2 PAN lsb
3 TILT msb 270°
4 TILT lsb
5 SPEED MOVEMENT
6 DIMMER
7 SHUTTER
8 COLOUR
9 COLOUR MODE
10 ROTATING GOBO WHEEL (GOBO 1)
11 GOBO 1 MODE
12 GOBO 1 ROTATION/INDEX COARSE - PRISM ROTATION
13 GOBO 1 INDEX FINE 16 bit
14 GOBO 1 SHAKE
15 FIXED GOBO WHEEL (GOBO 2)
16 GOBO 2 SHAKE
17 IRIS
18 IRIS MACROS
19 PRISM
20 FOCUS
21 LAMP ON/OFF - RESET

DMX CHANNEL	1	Parameter: **PAN msb**

DMX CHANNEL	2	Parameter: **PAN lsb**

DMX CHANNEL	3	Parameter: **TILT msb**

DMX CHANNEL	4	Parameter: **TILT lsb**

DMX CHANNEL	5	Parameter: **SPEED MOVEMENT**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-25	**18**				**Fast movement**
26-127					**Vector mode from fast to slow**
128-247					**Variable time reaction to DMX signal (fast to slow)**
248-255	**251**				**Slow reaction time to DMX signal**

DMX CHANNEL	6	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-8	**4**				**Black-out**
9-255					**Proportional dimmer**

DMX CHANNEL	7	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-19					**Black-out**
20-39					**Open**
40-59					**Black-out**
60-79					**Random Strobe**
80-89					**Strobe speed 1 min.**
90-99					**Strobe speed 2**
100-109					**Strobe speed 3**
110-119					**Strobe speed 4**
120-129					**Strobe speed 5**
130-139					**Strobe speed 6 max.**
140-149					**Pulse open speed 1 min.**
150-159					**Pulse open speed 2**
160-169					**Pulse open speed 3**
170-179					**Pulse open speed 4 max.**
180-189					**Pulse closed speed 1 min.**
190-199					**Pulse closed speed 2**
200-209					**Pulse closed speed 3**
210-219					**Pulse closed speed 4 max.**
220-227					**Colour and Gobo in black-out**
228-233					**Pan and Tilt in black-out**
234-255					**Open**

DMX CHANNEL	8	Parameter: **COLOUR**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 9 = FULL COLOUR (Dmx range value 0 - 63)					
0-27					**Colour1 (White)**
28-55					**Colour2**
56-83					**Colour3**
84-111					**Colour4**
112-139					**Colour5**
140-167					**Colour6**
168-195					**Colour7**
196-223					**Colour8**
224-255					**Colour9**

DMX CHANNEL	8	Parameter: **COLOUR**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 9 = HALF COLOUR (Dmx range value 64 - 127)					
0-25					**Colour1 (White)**
26-51					**Bicolour ½**
52-77					**Bicolour 2/3**
78-103					**Bicolour 3/4**
104-129					**Bicolour 4/5**
130-155					**Bicolour 5/6**
156-181					**Bicolour 6/7**
182-207					**Bicolour 7/8**
208-233					**Bicolour 8/9**
234-255					**Bicolour 9/1**
IF CHANNEL 9 = PROPORTIONAL COLOUR (Dmx range value 128 - 191)					
0-10					**Colour1 (White)**
11-255					**Proportional colour**
IF CHANNEL 9 = RAINBOW (Dmx range value 192 - 255)					
0-9					**Colour1 (White)**
10-127					**Right Rot.Speed from Max to Min**
128-137					**Stop**
138-255					**Left Rot.speed from Min to Max**

DMX CHANNEL	9	Parameter: **COLOUR MODE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-63					**Full Colour**
64-127					**Half Colour**
128-191					**Proportional Colour**
192-255					**Rainbow**

DMX CHANNEL	10	Parameter: **ROTATING GOBO WHEEL (GOBO 1)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-25					**Open**
26-51					**Gobo 1**
52-77					**Gobo 2**
78-103					**Gobo 3**
104-129					**Gobo 4**
130-155					**Gobo 5**
156-181					**Gobo 6**
182-207					**Gobo 7**
208-213					**Rotation speed 1 min.**

DMX CHANNEL	10	Parameter: **ROTATING GOBO WHEEL (GOBO 1)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
214-219					**Rotation speed 2**
220-225					**Rotation speed 3**
226-231					**Rotation speed 4**
232-237					**Rotation speed 5**
238-243					**Rotation speed 6**
244-249					**Rotation speed 7**
250-255					**Rotation speed 8 Max**

DMX CHANNEL	11	Parameter: **GOBO 1 MODE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**Gobo Rotation Mode**
128-255					**Gobo Index Mode**

DMX CHANNEL	12	Parameter: **GOBO 1 ROTATION/INDEX COARSE - PRISM ROTATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 11 = Gobo Rotation Mode (Dmx range value 0 - 127)					
0-9					**Stop**
10-127		**Counterclockwise rotation with prop. Speed from Max to Min**			
128-137					**Stop**
138-255		**Clockwise rotation with prop. Speed from Min to Max**			
IF CHANNEL 11 = Gobo Index Mode (Dmx range value 128 - 255)					
0-255					**Gobo index Coarse**

DMX CHANNEL	13	Parameter: **GOBO 1 INDEX FINE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Gobo Index Fine**

DMX CHANNEL	14	Parameter: **GOBO 1 SHAKE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9				**Stop**	
10-22				**Gobo Shake R-L Speed 1 Min.**	
23-35				**Gobo Shake R-L Speed 2**	
36-48				**Gobo Shake R-L Speed 3**	

DMX CHANNEL	14	Parameter: **GOBO 1 SHAKE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
49-61					**Gobo Shake R-L Speed 4**
62-74					**Gobo Shake R-L Speed 5**
75-87					**Gobo Shake R-L Speed 6**
88-100					**Gobo Shake R-L Speed 7**
101-113					**Gobo Shake R-L Speed 8**
114-126					**Gobo Shake R-L Speed 9 Max**
127-138					**Stop**
139-151					**Gobo Shake L-R Speed 1 Min**
152-164					**Gobo Shake L-R Speed 2**
165-177					**Gobo Shake L-R Speed 3**
178-190					**Gobo Shake L-R Speed 4**
191-203					**Gobo Shake L-R Speed 5**
204-216					**Gobo Shake L-R Speed 6**
217-229					**Gobo Shake L-R Speed 7**
230-242					**Gobo Shake L-R Speed 8**
243-255					**Gobo Shake L-R Speed 9 Max**

DMX CHANNEL	15	Parameter: **FIXED GOBO WHEEL (GOBO 2)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-16					**Open**
17-33					**Gobo 1**
34-50					**Gobo 2**
51-67					**Gobo 3**
68-84					**Gobo 4**
85-101					**Gobo 5**
102-118					**Gobo 6**
119-135					**Gobo 7**
136-152					**Gobo 8**
153-169					**Gobo 9**
170-186					**Gobo 10**
187-207					**Gobo 11**
208-213					**Speed rotation 1 min (Clockwise)**
214-219					**Speed rotation 2**
220-225					**Speed rotation 3**
226-231					**Speed rotation 4**
232-237					**Speed rotation 5**
238-243					**Speed rotation 6**
244-249					**Speed rotation 7**
250-255					**Speed rotation 8 max.**

DMX CHANNEL	16	Parameter: **GOBO 2 SHAKE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**Stop**
10-22					**Gobo Shake R-L Speed 1 Min.**
23-35					**Gobo Shake R-L Speed 2**
36-48					**Gobo Shake R-L Speed 3**
49-61					**Gobo Shake R-L Speed 4**
62-74					**Gobo Shake R-L Speed 5**
75-87					**Gobo Shake R-L Speed 6**
88-100					**Gobo Shake R-L Speed 7**
101-113					**Gobo Shake R-L Speed 8**
114-126					**Gobo Shake R-L Speed 9 Max**
127-138					**Stop**
139-151					**Gobo Shake L-R Speed 1 Min**
152-164					**Gobo Shake L-R Speed 2**
165-177					**Gobo Shake L-R Speed 3**
178-190					**Gobo Shake L-R Speed 4**
191-203					**Gobo Shake L-R Speed 5**
204-216					**Gobo Shake L-R Speed 6**
217-229					**Gobo Shake L-R Speed 7**
230-242					**Gobo Shake L-R Speed 8**
243-255					**Gobo Shake L-R Speed 9 Max**

DMX CHANNEL	17	Parameter: **IRIS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Linear Iris from Open to Closed**

DMX CHANNEL	18	Parameter: **IRIS MACROS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**No effect**
10-91					**Iris pulse at different speeds from Min to Max**
92-173					**Iris pulse with flash closing from Min to Max**
174-255					**Iris pulse with flash opening from Min to Max**

DMX CHANNEL	19	Parameter: **PRISM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**No effect**
128-255					**Prism inserted**

DMX CHANNEL	20	Parameter: **FOCUS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Linear Focus**

DMX CHANNEL	21	Parameter: **LAMP ON/OFF - RESET**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**No Effect**
10-60					**Lamp OFF (activ.after 3 seconds)**
61-129					**No Effect**
130-179					**Lamp ON (activ.after 3 seconds)**
180-200					**No Effect**
201-239					**Internal motor reset**
240-255					**Total Reset**

18- 8 MOTORS CONTROL CARD

8 MOTORS PCB

J7 Magnetic Sensors Connector

Line 1 Brown:
- Gobo2
- Iris
- Focus

Line 2 Orange:
- Colour
- Gobo1

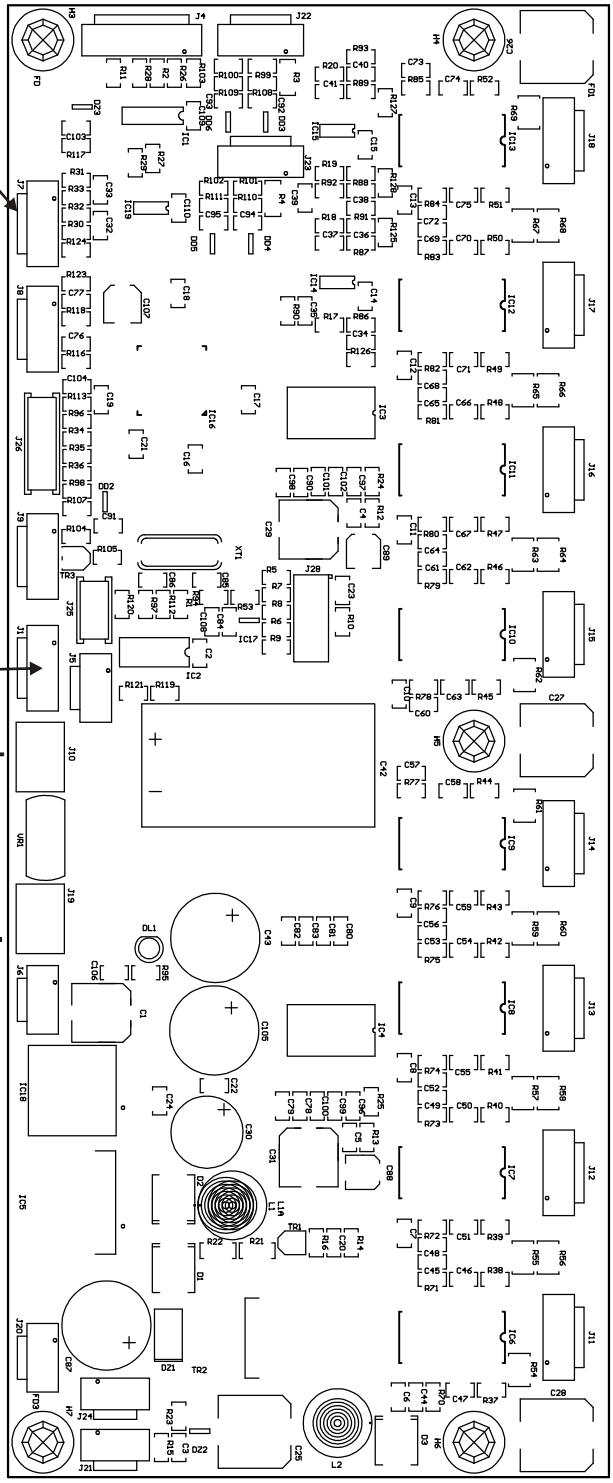
GND
ORANGE
BROWN
VCC

J1 Internal DATA Communication Connector From J8 Pan & Tilt card

\+

30 VDC

\-



Fans

Fans

Prism
(BLACK)

Focus
(DARK GREEN)

Strobe
(YELLOW)

Colour
(PINK)

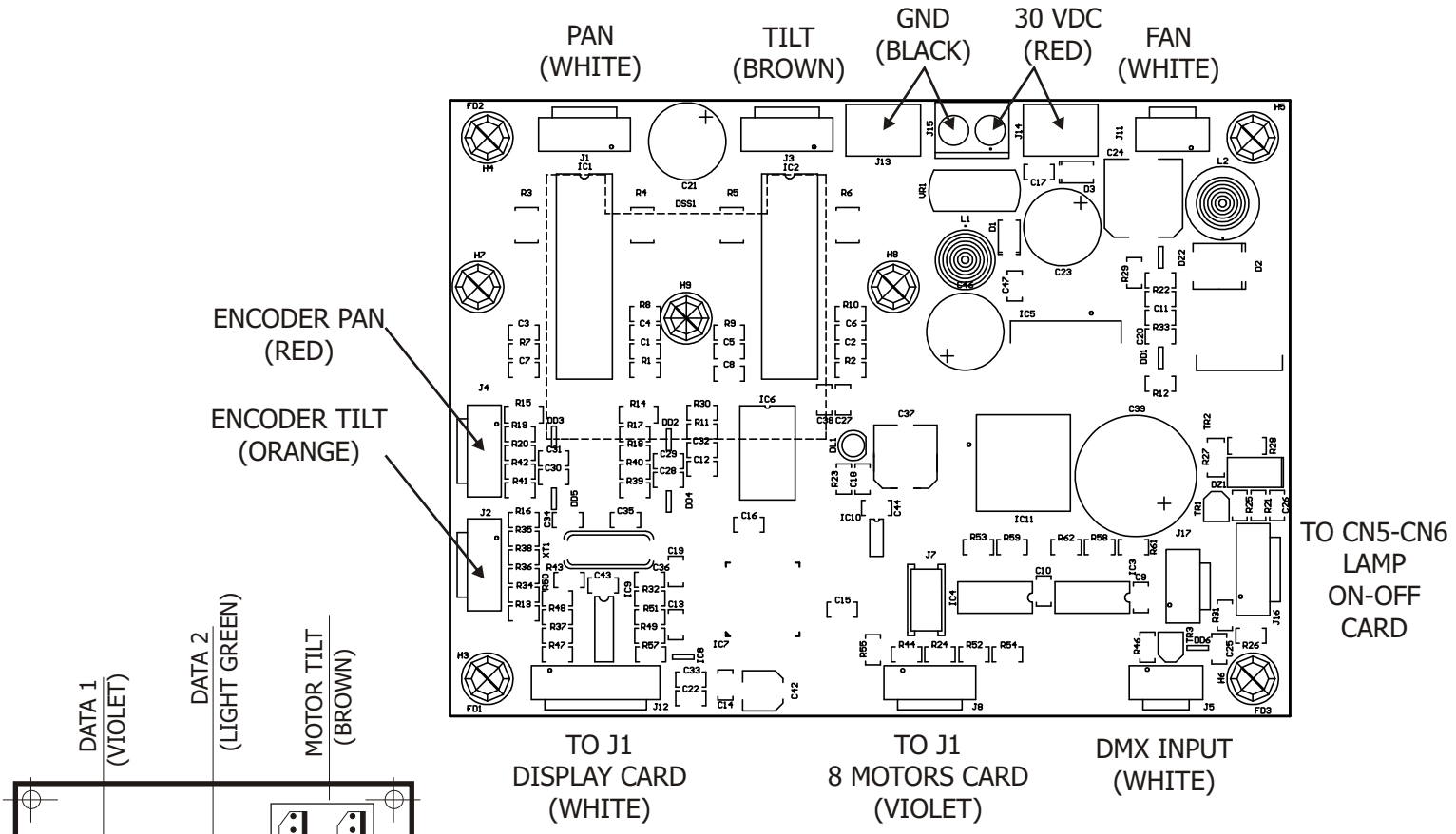
Gobo 1 /Prism rotation
(GREY)

Gobo 1
(LIGHT BLUE)

Gobo 1
(GOLD)

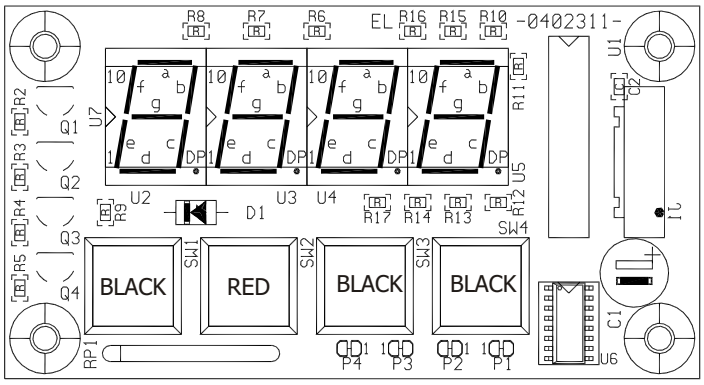
Iris
(BLUE)

19-PAN & TILT CARD



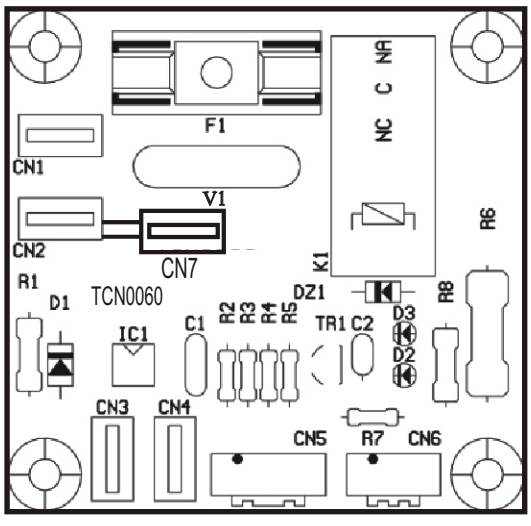
20-CABLES RESEND CARD

21-DISPLAY CARD



FROM J12 PAN&TILT CARD

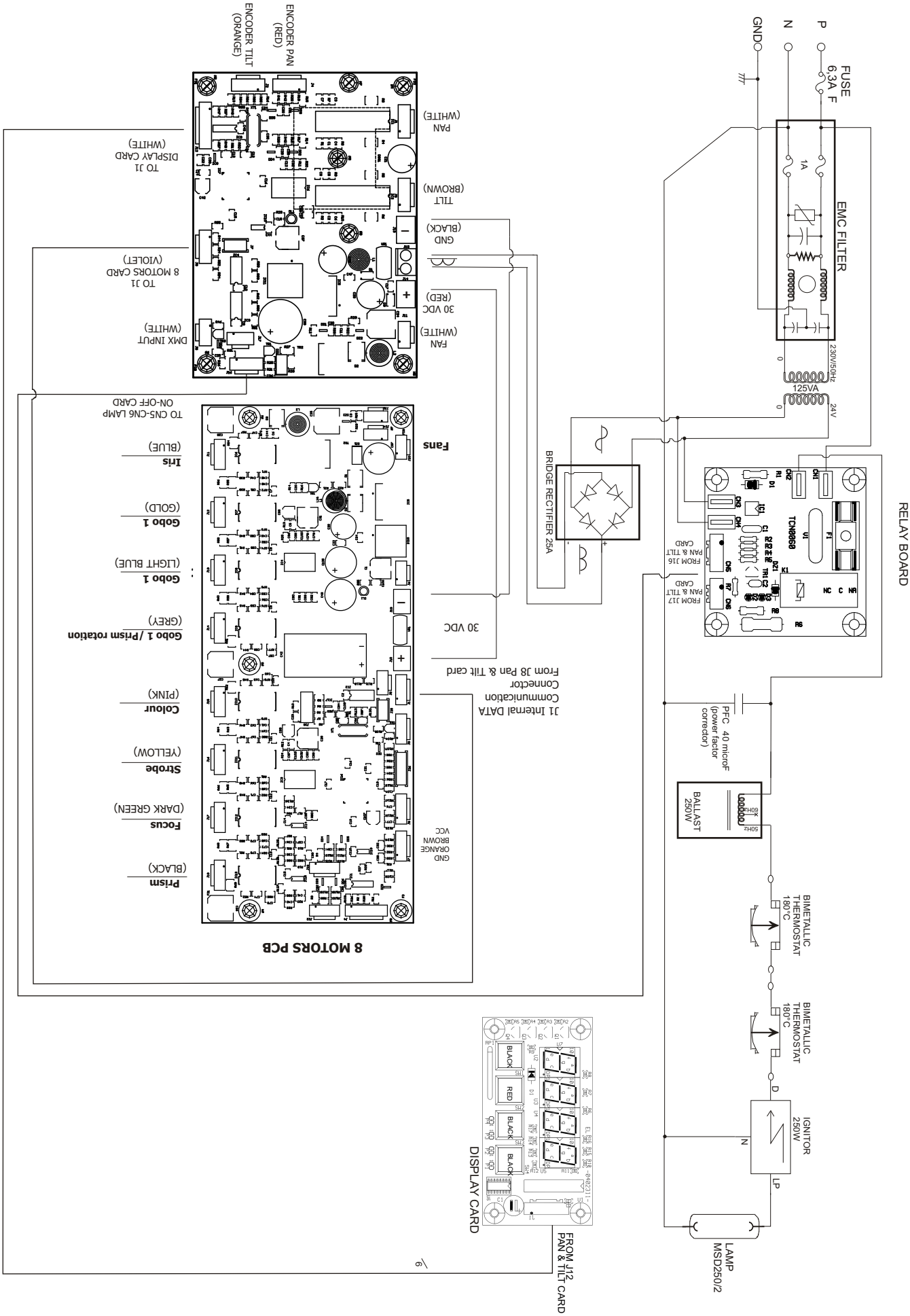
22-LAMP ON-OFF CONTROL CARD



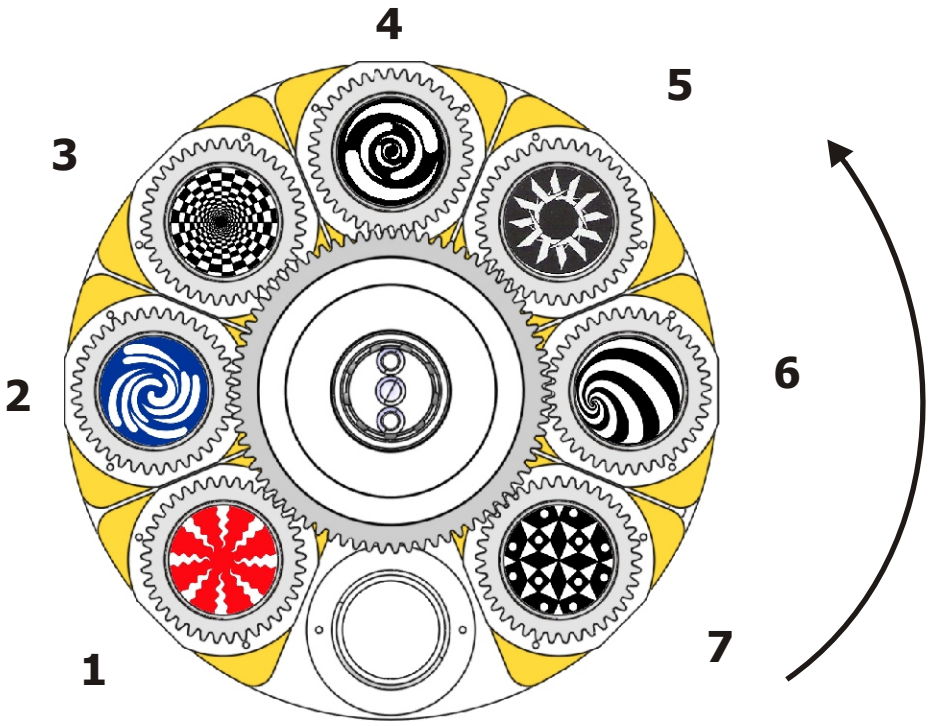
If the PCB card doesn' t work, move the cable "IN LAMP" from CN 1 to CN 7

To remove SnEr error from display, in Menu LAMP select oFF

23-WIRING DIAGRAM



24- ROTATING GOBO WHEEL(GOBO1)



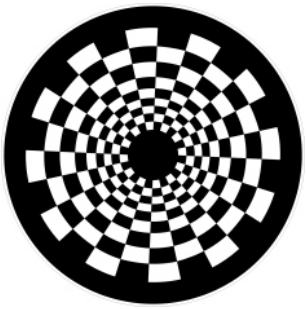
GOBO 1 DICRO

0516G029.02

GOBO 2 DICRO

0516G029

GOBO 3 DICRO



0516G029.01

GOBO 4 METAL

0516G030.01

GOBO 5 METAL

0516G030.02

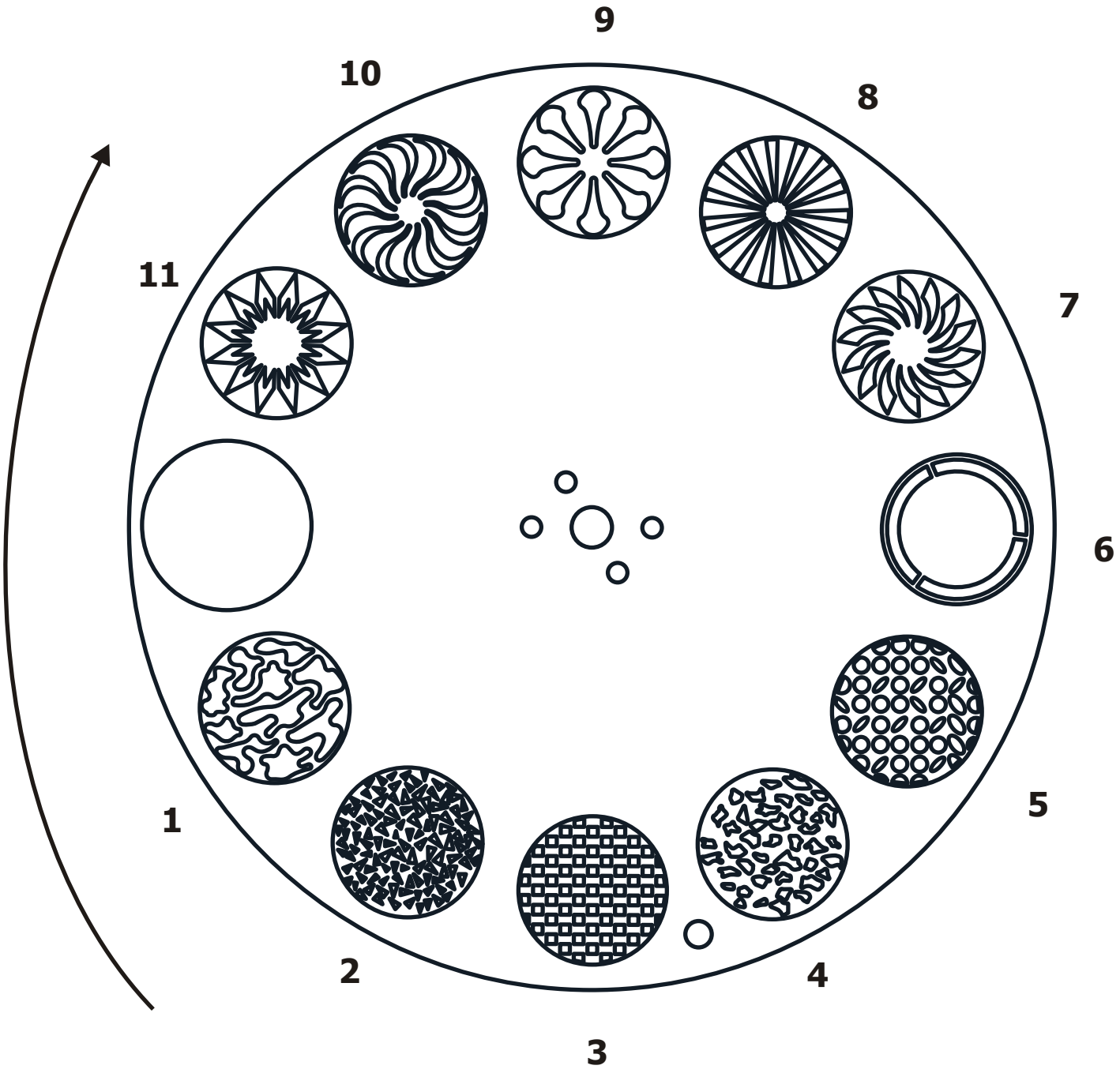
GOBO 6 METAL

0516G030.03

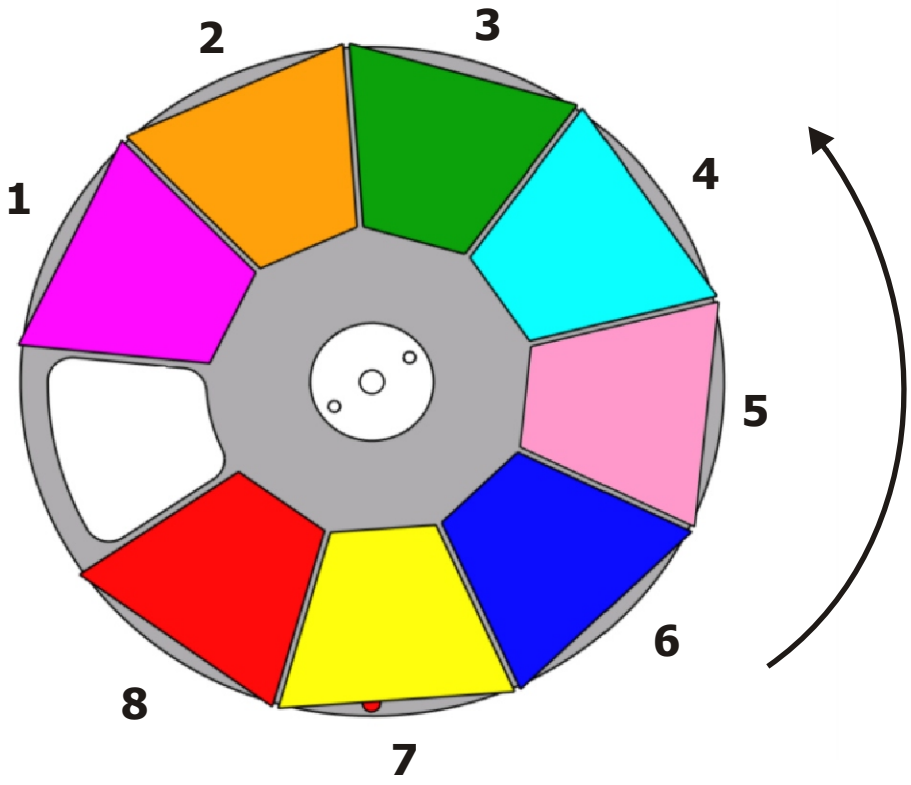
GOBO 7 METAL

0516G030.04

25- FIXED GOBO WHEEL(GOBO2)



26- COLOUR WHEEL



COL1

0507C043.D01
LAVANDER SL0064

COL2

0507C051.D01
ORANGE LW590

COL3

0507C042.D01
GREEN WB5055

COL4

0507C045.D01
CYAN SW 530

COL5

0507C052.D01
PINK SL4761

COL6

0507C041.D01
DARK BLUE SW490

COL7

0507C049.D01
YELLOW LW 515

COL8

0507C047.D01
RED LW 640

NOTES:

NOTES:

NOTES:

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DTS

The Lighting Company

ISO 9001:2000

D.T.S. quality system
is certified to the
ISO 9001:2000 standard

PROUDLY MADE IN ITALY

D.T.S. products are designed
and manufactured at the D.T.S.
plants in Italy

0517I093

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